

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	5001	transformer and capacitor and (high with pass) and (low with pass)	US-PGPUB; USPAT	OR	ON	2006/12/11 08:07
L3	954	1 and (band with pass with filter)	US-PGPUB; USPAT	OR	ON	2006/12/11 08:02
L4	41	3 and (transformer with spirals)	US-PGPUB; USPAT	OR	ON	2006/12/11 08:02
L5	18	4 and @ad<"20020222"	US-PGPUB; USPAT	OR	ON	2006/12/11 08:17
L8	1586	transformer and capacitor and (high with pass) and (low with pass)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/11 08:02
L15	12094	(transformer and capacitor and (high with pass with filter\$3) and (low with pass with filter\$3) and spirals (band near3 pass)).clm.	US-PGPUB; USPAT	OR	ON	2006/12/11 08:11
L18	1	(transformer and capacitor and (high with pass with filter\$3) and (low with pass with filter\$3) and spirals and (band near3 pass) and cascades\$3).clm.	US-PGPUB; USPAT	OR	ON	2006/12/11 08:15
L19	1	(transformer and capacitor and (high with pass with filter\$3) and (low with pass with filter\$3) and spirals and (band near3 pass)).clm.	US-PGPUB; USPAT	OR	ON	2006/12/11 08:17
L20	2	(transformer and capacitor and (high with pass) and (low with pass) and (band near3 pass) and cascades\$3).clm.	US-PGPUB; USPAT	OR	ON	2006/12/11 08:16
L21	1836	257/528,532.ccls.	US-PGPUB; USPAT	OR	ON	2006/12/11 08:20
L22	42	21 and @ad<"20020222" and transformer and capacitor	US-PGPUB; USPAT	OR	ON	2006/12/11 08:50
L23	15	22 and pass	US-PGPUB; USPAT	OR	ON	2006/12/11 08:18
L24	263	257/E27.001,E27.017,E27.024.ccls.	US-PGPUB; USPAT	OR	ON	2006/12/11 08:18
L26	6	24 and transformer and capacitor	US-PGPUB; USPAT	OR	ON	2006/12/11 08:19
L29	744	438/381.ccls.	US-PGPUB; USPAT	OR	ON	2006/12/11 08:50

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L30	13	29 and @ad<"20020222" and transformer and capacitor	US-PGPUB; USPAT	OR	ON	2006/12/11 08:51
L31	1398	455/73,80,280,272.ccls.	US-PGPUB; USPAT	OR	ON	2006/12/11 08:51
L32	37	31. and @ad<"20020222" and transformer and capacitor	US-PGPUB; USPAT	OR	ON	2006/12/11 08:51

DOCUMENT-IDENTIFIER: US 20050095791 A1

TITLE: Integration of filters using on-chip transformers for
rf and wireless applications

----- KWIC -----

the current application

Claims Text - CLTX (1):

1. A **band pass filter** formed on an integrated circuit (IC) chip, said **band pass filter** comprising: a **transformer** capable of receiving an input signal and providing **high pass filtering**, said **transformer** comprising at least a pair of metallic **spirals** formed on the IC chip; and a **capacitor** capable of receiving said input signal and providing **low pass filtering** in conjunction with an inductance of the **transformer**, wherein said **band pass filter provides band pass filtering** through cascading said **high pass and low pass filtering**.

Claims Text - CLTX (2):

2. The **band pass** filter of claim 1, further comprising a plurality of **band pass filter stages**, each **band pass** filter stage comprising a **capacitor and a transformer** comprising a pair of metallic **spirals** formed on the IC chip, wherein said **band pass** filter stages are cascaded to form the **band pass** filter.

Claims Text - CLTX (3):

3. The **band pass** filter of claim 1, wherein said metallic **spirals** comprise copper **spirals**.

Claims Text - CLTX (4):

4. The **band pass** filter of claim 1, wherein the **transformer** comprises a pair of **transformers** arrayed in series, wherein each **transformer** comprises a pair of metallic **spirals**.

Claims Text - CLTX (5):

5. The **band pass** filter of claim 1, wherein the metallic **spirals** are co-planar and have been inter-wound to form the **transformer** on the IC chip.

Claims Text - CLTX (6):

6. The **band pass** filter of claim 1, wherein the metallic **spirals** are stacked, one on top of the other, to form the **transformer** on the IC chip.

Claims Text - CLTX (7):

7. The **band pass** filter of claim 6, wherein the metallic **spirals** are separated by a dielectric material disposed therebetween.

Claims Text - CLTX (8):

8. The **band pass** filter of claim 7, wherein the dielectric material comprises silicon dioxide.

Claims Text - CLTX (9):

9. The **band pass** filter of claim 1, wherein communication circuitry is formed on the same IC chip as the transformer and the **capacitor**.

Claims Text - CLTX (10):

10. The **band pass** filter of claim 1, wherein a transformation ratio of the **transformer** is between approximately 1:1 and approximately 1:2.

Claims Text - CLTX (11):

11. The **band pass** filter of claim 1, wherein the IC chip comprises a silicon substrate.

Claims Text - CLTX (12):

12. The **band pass** filter of claim 1, wherein the metallic **spirals** have a substantially rectangular or square overall shape.

Claims Text - CLTX (13):

13. A communication system-on-chip (SOC) comprising communication circuitry and a **band pass filter** formed on an integrated circuit (IC) chip, said **band pass filter** comprising: a **transformer** capable of receiving an input signal and providing **high pass filtering**, said **transformer** comprising at least a pair of metallic **spirals** formed on the IC chip; and a **capacitor** capable of receiving said input signal and providing **low pass filtering** in conjunction with an inductance of the **transformer**, wherein said **band pass filter provides band pass filtering** through cascading said **high pass and low pass filtering**.

Claims Text - CLTX (14):

14. The communication SOC of claim 13, wherein the **band pass filter further comprises a plurality of band pass filter stages**, each **band pass** filter stage comprising a **capacitor and a transformer** comprising a pair of metallic **spirals** formed on the IC chip, wherein said **band pass** filter stages are cascaded to form the **band pass** filter.

Claims Text - CLTX (15):

15. The communication SOC of claim 13, wherein said metallic **spirals**

comprise copper spirals.

Claims Text - CLTX (16):

16. The communication SOC of claim 13, wherein the transformer comprises a pair of transformers arrayed in series, wherein each transformer comprises a pair of metallic spirals.

Claims Text - CLTX (17):

17. The communication SOC of claim 13, wherein the metallic spirals are co-planer and have been inter-wound to form the transformer on the IC chip.

Claims Text - CLTX (18):

18. The communication SOC of claim 13, wherein the metallic spirals are stacked, one on top of the other, to form the transformer on the IC chip.

Claims Text - CLTX (19):

19. The communication SOC of claim 18, wherein the metallic spirals are separated by a dielectric material disposed therebetween.

Claims Text - CLTX (21):

21. The communication SOC of claim 13, wherein a transformation ratio of the transformer is between approximately 1:1 and approximately 1:2.

Claims Text - CLTX (22):

22. A communication device comprising: a communication system-on-chip (SOC) comprising communication circuitry and a band pass filter formed on an integrated circuit (IC) chip, said band pass filter comprising: a transformer capable of receiving an input signal and providing high pass filtering, said transformer comprising at least a pair of metallic spirals formed on the IC chip; and a capacitor capable of receiving said input signal and providing low pass filtering in conjunction with an inductance of the transformer, wherein said band pass filter provides band pass filtering through cascading said high pass and low pass filtering.

Claims Text - CLTX (23):

23. The communication device of claim 22, wherein the band pass filter further comprises a plurality of band pass filter stages, each band pass filter stage comprising a capacitor and a transformer comprising a pair of metallic spirals formed on the IC chip, wherein said band pass filter stages are cascaded to form the band pass filter.

Claims Text - CLTX (24):

24. The communication device of claim 22, wherein said metallic spirals comprise copper spirals.

Claims Text - CLTX (25):

25. The communication device of claim 22, wherein the transformer comprises a pair of transformers arrayed in series, wherein each transformer comprises a pair of metallic spirals.

Claims Text - CLTX (26):

26. The communication device of claim 22, wherein the metallic spirals are co-planer and have been inter-wound to form the transformer on the IC chip.

Claims Text - CLTX (27):

27. The communication device of claim 22, wherein the metallic spirals are stacked, one on top of the other, to form the transformer on the IC chip.

Claims Text - CLTX (28):

28. The communication device of claim 27, wherein the metallic spirals are separated by a dielectric material disposed therebetween.

Claims Text - CLTX (30):

30. The communication device of claim 22, wherein a transformation ratio of the transformer is between approximately 1:1 and approximately 1:2.